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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,775	01/30/2004	Kevin Lee Miller	1875.3910000	5553
26111	7590	09/09/2004		EXAMINER
STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005				YOUNG, BRIAN K
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	K
	10/767,775	MILLER, KEVIN LEE	
	Examiner Brian Young	Art Unit 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 30 January 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-24 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,9 and 17 is/are rejected.
 7) Claim(s) 2-8,10-16 and 18-24 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 30 January 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 9 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Sata.

Sato discloses a demodulator for demodulating a received quadrature amplitude modulated signal includes a generator for generating a local carrier signal, a synchronous detector responsive to the local carrier signal for deriving in phase and

quadrature phase base bank components from the modulated signal, means responsive

to the received signal for deriving timing pulses, a first sampler responsive to the timing

pulses for producing samples of the in phase base band components, and a second

sampler responsive to the timing pulses for producing samples of the quadrature phase

base band components. First delay means for delaying the in phase component samples, second delay means for delaying the quadrature phase component samples,

a correlation circuit responsive to the undelayed and delayed, in phase and quadrature

phase, component samples for producing a correlation signal. A synchronous pulse

generator responsive to the timing pulses and the correlation signal produces synchronizing pulses. A phase control circuit responsive to the synchronizing pulses

and the undelayed and delayed, in phase and quadrature phase, component samples

produces a control signal. The control signal is supplied to the local carrier generator to control the phase of the local carrier signal relative to the received signal.

Referring to FIG. 3, a demodulator responsive to an input signal *modulated at a transmitting end in compliance with the signal mapping* and received at a receiving end depicted for producing a demodulated signal includes an input terminal 41 for the input signal, an output terminal 42 for the demodulated signal, a full-wave rectifier 43 for rectifying the input signal, a tuning *filter 44* responsive to the full-wave rectified input signal for producing local timing pulses of a repetition period equal to 1/2 of the clock interval T used in the transmitting end, a phase adjuster 45 for adjusting a predetermined amount the phase of the timing pulse to produce sampling or phase adjusted timing pulses, a voltage controlled oscillator 46 for generating a local carrier signal, a phase shifter 47 for shifting the phase of the local carrier signal by $\pi/2$, a synchronous detector 50 responsive to a cosine and a sine local carrier signal supplied from the oscillator 46 and shifter 47 and to the input signal for producing in phase and quadrature

phase base band components of the input signal, a first and a second sampler 51 and 52 responsive to the sampling pulses for sampling the in phase and quadrature phase components, and a combining circuit 55 for combining the sampled base band components to supply the combined signal to the output terminal 42 as the demodulated signal. *The detector 50 comprises a first and second ring modulator 56 and 57 responsive to the cosine and sine local carrier signals for modulating the input signal and low-pass filters 58 and 59 for extracting the base band components from the modulated signals.*

3. Claims 2-8,10-16,18-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Young whose telephone number is 571-272-1816. The examiner can normally be reached on Mon-Fri 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian Young
Primary Examiner
Art Unit 2819
